

RECORD OF PERFORMANCE QUALIFICATIONS

TT

INSTRUCTIONS

Record of Performance Qualifications shall be completed for enlisted personnel of the Coast Guard and Coast Guard Reserve as outlined in the Enlisted Qualifications Manual (COMDTINST M1414.8, series). As proficiency in each performance qualification is demonstrated, the DATE and INITIALS column shall be completed. Personnel are required to demonstrate proficiency in all new qualifications assigned to their rating. Qualifications previously demonstrated, dated and initialed off will be not be recertified.

Prior to commencement of ADT, the member's Reserve Unit shall indicate, by circling in red, those qualifications which cannot be completed during inactive duty and should be completed on ADT.

Rating TELEPHONE TECHNICIAN	Abbreviation TT
Date Completed all Performance Qualifications for Rate Level	
E-4	E-5
E-6	
E-7	E-8
E-9	
NAME (Last, First, Middle Initial)	SOCIAL SECURITY NUMBER

PREVIOUS EDITION IS OBSOLETE  
LOCAL REPRO AUTH

SIGNATURE OF SUPERVISOR

DATE	NAME/SIGNATURE	INITIALS	RATE	UNIT

REMARKS

RATING: TELEPHONE TECHNICIAN (TT)	DATE	INIT
<p><u>PERFORMANCE QUALIFICATIONS FOR ADVANCEMENT</u></p> <p>A. SAFETY AND FIRST AID</p> <p>4.01 Simulate the procedure for removing an electrical shock victim from an energized circuit in accordance with the Electronics Manual (COMDTINST M10550.25 series).</p> <p>4.02 Demonstrate the procedure for adult Cardio-Pulmonary Resuscitation (CPR) in accordance with the American Heart Association Manual, Heartsaver.</p> <p>4.03 Demonstrate the general safety procedures for working on telecommunications equipment in accordance with the Electronics Manual (COMDTINST M10550.25 series).</p> <p>4.04 Discharge a charged telecommunications circuit in accordance with the Electronics Manual (COMDTINST M10550.25 series).</p> <p>4.05 Perform electrical "tag out" procedures on electrical/telecommunications equipment in accordance with the Electronics Manual (COMDTINST M10550.25 series).</p> <p>4.06 Demonstrate the safety procedures for handling batteries in accordance with the Electronics Manual (COMDTINST M10550.25 series).</p> <p>4.07 Demonstrate the safe use and handling of cleaning solvents in accordance with the Electronics Manual (COMDTINST M10550.25 series).</p> <p>4.08 Test and ventilate a manhole for safe atmosphere in accordance with Army Manual FM 11-372-6 Outside Plant Cable Maintenance and Repair.</p> <p>4.09 Perform safety inspections of wooden telephone poles in accordance with Army Manual FM 11-372-6 Outside Plant Cable Maintenance and Repair.</p>		
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<p>5.01 Demonstrate the general safety procedures for use of the following electrical power tools in accordance with the Electronics Manual (COMDTINST M10550.25 series) and NAVEDTRA Manual Tools and Their Uses:</p> <ul style="list-style-type: none"> <li>a. Drill</li> <li>b. Circular/Reciprocating Saw</li> </ul> <p>5.02 Simulate the safety procedures to follow when working aloft on a vessel in accordance with the Electronics Manual (COMDTINST M10550.25 series).</p> <p>6.01 Perform safety inspections of your work spaces, and make recommendations to correct discrepancies in accordance with the Electronics Manual (COMDTINST M10550.25 series).</p> <p>6.02 Perform general condition safety inspections on towers (325 feet in height and under) in accordance with the Tower Manual (COMDTINST M11000.4 series).</p> <p>B. ELECTRONIC COMPONENTS AND CIRCUITRY</p> <p>4.01 Perform a functional check on each of the following components in accordance with the NAVEDTRA Manuals Navy Electrical and Electronics Training Series and the NAVEXLEX Electronics Information and Maintenance Bulletin-Electronic Circuits:</p> <ul style="list-style-type: none"> <li>a. Capacitors.</li> <li>b. Resistors.</li> <li>c. Transformers.</li> <li>d. Inductors.</li> <li>e. Switches.</li> <li>f. Fuses.</li> <li>g. Circuit breakers.</li> <li>h. Relays.</li> <li>i. Diodes.</li> <li>j. Bipolar transistors.</li> <li>k. Zener diodes.</li> <li>l. Light emitting diodes (LED).</li> <li>m. Thermistors.</li> <li>n. Speakers.</li> <li>o. Interlock switches.</li> <li>p. Microphones.</li> <li>q. Varistors.</li> <li>r. Silicon controlled rectifiers.</li> </ul>		
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<p>4.02 Perform preventive and corrective maintenance on an adjustable regulated power supply in accordance with the NAVEDTRA Manuals Navy Electrical and Electronics Training Series and the NAVELEX Electronics Information and Maintenance Bulletin-Electronic Circuits.</p> <p>4.03 Perform preventive and corrective maintenance on an audio amplifier in accordance with the NAVEDTRA Manuals Navy Electrical and Electronics Training Series and the NAVELEX Electronics Information and Maintenance Bulletin-Electronic Circuits.</p> <p>4.04 Perform a functional check on a digital logic circuit in accordance with the NAVEDTRA Manuals Navy Electrical and Electronics Training Series and the NAVELEX Electronics Information and Maintenance Bulletin-Electronic Circuits.</p> <p>4.05 Perform a functional check on RF transmitters and receivers associated with a microwave/UHF radio-link carrier system in accordance with the equipment technical manuals, the NAVEDTRA Manuals Navy Electrical and Electronics Training Series and the NAVELEX Electronics Information and Maintenance Bulletin-Electronic Circuits.</p> <p>C. SHOP PRACTICES</p> <p>4.01 Install the following connectors in accordance with the manufacturer's installation instructions:</p> <ul style="list-style-type: none"> <li>a. BNC (crimp &amp; solder).</li> <li>b. DB series connector (crimp &amp; solder).</li> <li>c. Multipin (i.e. Molex type) connector (mechanical).</li> <li>d. Multipin (i.e. MS type) connector (solder).</li> <li>e. Solder-on and crimp-on wire lugs.</li> <li>f. UHF connector for RG-213.</li> <li>g. Fiber Optic connector.</li> <li>h. RJ series connectors (11, 21, 45, etc.).</li> <li>i. N type connector.</li> </ul> <p>4.02 Install cables through stuffing tubes in accordance with the NAVSHIPS Cable Comparison Guide and NAVEDTRA Manual IC Electrician 3.</p>		
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<p>4.03 Waterproof weather exposed connectors and hardware in accordance with the manufacturer's instructions.</p> <p>4.04 Demonstrate the proper procedures for handling and storage of electrostatic sensitive devices in accordance with the NAVEDTRA Manual Navy Electrical and Electronics Training Series (Module 14).</p> <p>4.05 Replace a defective electronic component by soldering to a printed circuit board in accordance with the NAVEDTRA Manual Navy Electrical and Electronics Training Series (Module 14) and the Electronics Manual (COMDTINST M10550.25 series).</p> <p>4.06 Perform preventive maintenance on reserve battery systems (e.g. NICAD, Gel cell, Lead-acid) in accordance with the manufacturer's instructions and the Electronics Manual (COMDTINST M10550.25 series).</p> <p>5.01 Demonstrate the proper use of the following tools in accordance with the NAVEDTRA Manuals Construction Electrician 3, Tools and Their Uses, and Army Manual FM 11-487-3 Telephone Inside Plant Installation Fundamentals:</p> <ul style="list-style-type: none"> <li>a. Tap.</li> <li>b. Dies.</li> <li>c. Chassis punch.</li> <li>d. Wire wrap.</li> <li>e. Hole saw.</li> <li>f. Wire and thread gauge.</li> <li>g. Conduit bender.</li> </ul> <p>5.02 Install a premises conduit system (EMT or PVC) using the following components in accordance with the National Electric Code and NAVEDTRA Manual Construction Electrician 3:</p> <ul style="list-style-type: none"> <li>a. 90 degree bend.</li> <li>b. Saddle bend.</li> <li>c. Offset bend.</li> <li>d. Couplings and connectors.</li> <li>e. Junction box.</li> <li>f. Clamps.</li> </ul>		
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<p>5.03 Install a telecommunications equipment ground in accordance with the National Electric Code, MIL-HDBK-419 and Electronics Manual (COMDTINST M10550.25 series).</p> <p>5.04 Perform exothermic welding or silver soldering in accordance with the NAVEDTRA Manual Hull Maintenance Technician 3 &amp; 2, Naval Ships Technical Manual Volume I Chapter 074 and the manufacturer's instructions.</p> <p>5.05 Correct and modify as necessary a unit's telecommunications equipment block diagrams and cable run sheets in accordance with NAVELEX Manual Designers Planning Manual for Naval Communications Facilities Ashore.</p> <p>6.01 Prepare "As Built" drawings of a telecommunications installation in accordance with NAVELEX Manual Designers Planning Manual for Naval Communications Facilities Ashore.</p> <p>6.02 Prepare a circuit layout record for a telecommunications circuit installation in accordance with NAVELEX Manual Designers Planning Manual for Facilities Ashore.</p> <p>8.01 Review and modify construction and architectural blueprints to ensure all required telecommunications systems are correctly illustrated and included in the building's design in accordance with the Civil Engineering Manual (COMDTINST M11000.11 series) and Federal Information Processing Standard (FIPS) 175.</p> <p>D. VOICE TELECOMMUNICATIONS SYSTEMS</p> <p>4.01 Given voice circuit parameters, perform the following tests on analog circuits in accordance with the applicable test equipment technical manuals:</p> <ul style="list-style-type: none"> <li>a. Line loss.</li> <li>b. Noise (e.g. idle channel, impulse).</li> <li>c. Frequency response.</li> </ul>		
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<p>4.02 Perform a functional check on the following telephone circuit protection devices and associated grounds in accordance with Lee's ABC Teletraining Volume 1 and the National Electric Code:</p> <ul style="list-style-type: none"> <li>a. Carbon gap.</li> <li>b. Gas tubes.</li> <li>c. Fused links.</li> <li>d. Semiconductor ("Diode type").</li> </ul> <p>4.03 Given applicable circuit layout records and transmission equipment technical manuals, perform preventive and corrective maintenance on the following telephone circuit equipment:</p> <ul style="list-style-type: none"> <li>a. 2-wire/4-wire termination set.</li> <li>b. 4-wire line amplifier with loopback.</li> <li>c. Signalling interface equipment.</li> <li>d. Circuit bridge.</li> </ul> <p>4.04 Given circuit signalling configuration documentation perform the following functional signalling tests on voice grade circuits:</p> <ul style="list-style-type: none"> <li>a. Supervisory (e.g. Loop Start, Ground Start, E&amp;M, Reverse Battery).</li> <li>b. Address (e.g. Dial Pulse, DTMF, MF).</li> <li>c. Control (e.g. Wink Start, Delay Dial, Stop-Go).</li> </ul> <p>4.05 Install interior station wire and a telephone instrument in accordance with the National Electric Code, Federal Information Processing Standard 176 and Lee's ABC Teletraining Volume 2.</p> <p>4.06 Perform preventive and corrective maintenance on interior station wire and a telephone instrument in accordance with the Lee's ABC Teletraining Volume 2.</p> <p>4.07 Perform preventive and corrective maintenance on an electronic telephone switching system (EPABX) in accordance with the equipment technical manuals.</p>		
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<p>4.08 Perform the following tasks, including necessary programming, on an electronic telephone switching system (EPABX) in accordance with the National Electric Code, Federal Information Processing Standard 176, Lee's ABC Teletraining Volume 2 and the equipment technical manuals:</p> <ul style="list-style-type: none"> <li>a. Add a single line telephone instrument.</li> <li>b. Add a multiline electronic telephone set (i.e. SUPERSET or equivalent).</li> <li>c. Assign a class of service.</li> <li>d. Add an incoming trunk circuit.</li> </ul> <p>4.09 Perform preventive and corrective maintenance on a 1A2 key telephone system in accordance with equipment technical manuals.</p> <p>4.10 Perform the following tasks on a 1A2 key telephone systems in accordance with the National Electric Lee's ABC Teletraining Volume 15, and the equipment technical manuals:</p> <ul style="list-style-type: none"> <li>a. Add a telephone instrument.</li> <li>b. Add an intercom station.</li> <li>c. Add an incoming line circuit.</li> <li>d. Add appropriate audible signalling device.</li> </ul> <p>4.11 Perform preventive and corrective maintenance on an electronic key telephone systems in accordance with the equipment technical manuals.</p> <p>4.12 Perform the following tasks, including necessary programming, on an electronic key telephone system in accordance with the National Electric Code, Federal Information Processing Standard 176, Lee's ABC Teletraining Volume 15, and the equipment technical manuals:</p> <ul style="list-style-type: none"> <li>a. Add a telephone instrument (single and multiline).</li> <li>b. Add an intercom station.</li> <li>c. Add an incoming line circuit</li> </ul> <p>4.13 Perform a functional check on a multichannel recorder in accordance with the equipment technical manuals.</p>		
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<p>4.14 Install public address system speakers in accordance with the National Electric Code and the equipment technical manuals.</p> <p>4.15 Perform preventive and corrective maintenance on public address systems in accordance with the equipment technical manuals.</p> <p>5.01 Given a list of signalling requirements (Supervisory, Address and Control) and associated equipment, configure the equipment on a voice grade circuit for proper operation in accordance with Tellabs Manual Special Services Telephony and the equipment technical manuals.</p> <p>5.02 Given an installation plan, install the following telecommunications transmission media and components in accordance with the National Electric Code, Federal Information Processing Standards 174, 175, 176 and the equipment technical manuals:</p> <ul style="list-style-type: none"> <li>a. Main distribution and/or intermediate distribution frames (MDF/IDF).</li> <li>b. Riser and/or lateral feeder and distribution cables.</li> <li>c. Patch panels and/or terminal blocks and associated cross-connections.</li> <li>d. User interface jacks/receptacles.</li> </ul> <p>5.03 Given an installation plan, install the following components of a telephone system in accordance with the National Electric Code, Federal Information Processing Standards 174, 175, 176, Electronics Manual (COMDTINST M10550.25 series), and the equipment technical manuals:</p> <ul style="list-style-type: none"> <li>a. Electronic telephone switching system (EPABX) or electronic key service unit.</li> <li>b. Transmission and signalling interface equipment.</li> <li>c. Telephone circuit and power protection equipment.</li> </ul> <p>5.04 Perform a functional check on a STU-III secure telephone set in accordance with the equipment technical manuals.</p>		
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<p>5.05 Given an installation plan, install the following components of a public address system in accordance with the National Electric Code and the equipment technical manuals:</p> <ul style="list-style-type: none"> <li>a. Amplifiers.</li> <li>b. Microphones/audio source equipment (e.g. audio alarms, music sources, etc.)</li> <li>c. Zoning/switching equipment.</li> </ul> <p>6.01 Given results of the following analog circuit tests applicable vendor tariffs and circuit specifications, make recommendations for correcting circuit deficiencies:</p> <ul style="list-style-type: none"> <li>a. Line loss.</li> <li>b. Noise (e.g. idle channel, impulse).</li> <li>c. Frequency response.</li> </ul> <p>6.02 Perform the following electronic telephone switching system (EPABX) management functions in accordance with the equipment technical manuals:</p> <ul style="list-style-type: none"> <li>a. Review Automatic Route Selection (ARS) program.</li> <li>b. Review class of service.</li> <li>c. Maintain system records.</li> <li>d. Review system configuration.</li> <li>e. Make recommendations for improving system configuration and use.</li> </ul> <p>6.03 Perform a general condition inspection of a public address system to ensure installation and operation is in accordance with the appropriate facility installation standards.</p> <p>6.04 Prepare an installation plan for the following telecommunications transmission media and components in accordance with the National Electric Code, Federal Information Processing Standards 174, 175, 176, and the equipment technical manuals:</p> <ul style="list-style-type: none"> <li>a. Main distribution and/or intermediate distribution frames (MDF/IDF).</li> <li>b. Riser and/or lateral feeder and distribution cables.</li> <li>c. Patch panels and/or terminal blocks and associated cross-connections.</li> <li>d. User interface jacks/receptacles.</li> </ul>		
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<p>7.01 Perform a general condition inspection on a telephone system to ensure installation and operation is in accordance with the appropriate facility installation standards.</p> <p>7.02 Develop and implement an installation and cut-over plan for a telephone system in accordance with the National Electric Code, Federal Information Processing Standards 174, 175, 176, Electronics Manual (COMDTINST M10550.25 series), Telecommunications Manual (COMDTINST M2000.3B series), Civil Engineering Manual (COMDTINST M11000.11 series) and the Dow Jones-Irwin text Handbook of Telecommunications Management.</p> <p>7.03 Develop and implement a plan for the installation and cut-over of a public address system in accordance with the National Electric Code, Federal Information Processing Standards 174, 175, 176, Electronics Manual (COMDTINST M10550.25 series), Telecommunications Manual (COMDTINST M2000.3B series), Civil Engineering Manual (COMDTINST M11000.11 series) and the Dow Jones-Irwin text Handbook of Telecommunications Management.</p> <p>8.01 Perform a site survey and make recommendations on the following elements of a telecommunications installation in accordance with the National Electric Code, Federal Information Processing Standards 174, 175, 176, Electronics Manual (COMDTINST M10550.25 series), Telecommunications Manual (COMDTINST M2000.3B series), Civil Engineering Manual (COMDTINST M11000.11 series) and applicable equipment engineering specifications:</p> <ul style="list-style-type: none"> <li>a. Equipment location and space requirements.</li> <li>b. Electrical power requirements.</li> <li>c. Selection of equipment/systems/services.</li> <li>d. Physical and logical configuration.</li> </ul>		
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<p>E. DATA TELECOMMUNICATIONS SYSTEMS</p> <p>4.01 Perform functional checks and corrective maintenance on the following data communications systems components in accordance with Understanding Data Communications, Lee's ABC Teletraining Volume 11, and the equipment technical manuals:</p> <ul style="list-style-type: none"> <li>a. Data communications equipment (Modems, Data service units, etc.).</li> <li>b. Data terminal equipment.</li> <li>c. Multiplexers.</li> <li>d. Encryption devices.</li> <li>e. Data patch panels.</li> </ul> <p>4.02 Perform the following network and link level (OSI Levels 2 &amp; 3) tests on a data communications system in accordance with Understanding Data Communications, test equipment technical manuals, and applicable network, circuit, and equipment specifications:</p> <ul style="list-style-type: none"> <li>a. Bit error rate test</li> <li>b. Protocol test</li> </ul> <p>4.03 Perform a functional check on the following electrical data interface arrangements in accordance with Understanding Data Communications, and applicable equipment technical manuals:</p> <ul style="list-style-type: none"> <li>a. EIA-RS-232C.</li> <li>b. MIL-STD-188C.</li> <li>c. EIA-RS-449/CCITT V.35</li> </ul> <p>5.01 Given an installation plan, install the following data communications system components in accordance with the National Electric Code, Federal Information Processing Standards 174, 175, 176, Electronics Manual (COMDTINST M10550.25 series), and the equipment technical manuals:</p> <ul style="list-style-type: none"> <li>a. Data communications equipment (Modems, Data service units, etc.)</li> <li>b. Data terminal equipment.</li> <li>c. Multiplexers.</li> <li>d. Encryption devices.</li> <li>e. Data patch panels.</li> </ul>		
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<p>7.01 Perform a general condition inspection on a data communications system to ensure installation and operation is in accordance with the appropriate facility installation standards.</p> <p>7.02 Develop and implement an installation and cut-over plan for a data communications system in accordance with the National Electric Code, Federal Information Processing Standards 174, 175, 176, Electronics Manual (COMDTINST M10550.25 series), Telecommunications Manual (COMDTINST M2000.3B series), Civil Engineering Manual (COMDTINST M11000.11 series) and the Dow Jones-Irwin text Handbook of Telecommunications Management.</p> <p>8.01 Make recommendations for interface equipment necessary to implement changes, and/or additions and improvements to a data communications network in accordance with the Federal Information Processing Standards 174, 175, 176, Electronics Manual (COMDTINST M10550.25 series), Telecommunications Manual (COMDTINST M2000.3B series), and the Dow Jones-Irwin text Handbook of Telecommunications Management, and equipment engineering specifications.</p> <p>F. SHIPBOARD TELECOMMUNICATIONS SYSTEMS</p> <p>4.01 Perform preventive and corrective maintenance on shipboard public address and intercom systems in accordance with the equipment technical manuals.</p> <p>5.01 Using ship's drawings, trace a signal path through a secure shipboard record message traffic system.</p> <p>8.01 Design a telephone system installation for a CG vessel in accordance with the Electronics Manual (COMDTINST M10550.25 series), Naval Engineering Manual (COMDTINST M9000.6 series), and equipment engineering specifications.</p>		
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<p>G. OUTSIDE PLANT</p> <p>4.01 Using a TDR, tone gear and megger, locate the following cable faults in accordance with Army Manual FM 11-372-4 Outside Plant Cable Testing and the test equipment technical manuals:</p> <ul style="list-style-type: none"> <li>a. Shorts.</li> <li>b. Opens.</li> <li>c. Grounds.</li> <li>d. Crosses.</li> </ul> <p>4.02 Splice a PIC-filled telephone cable using the following methods in accordance with Army Manual FM 11-372-1 Outside Plant Cable Splicing and the manufacturer's instructions:</p> <ul style="list-style-type: none"> <li>a. Mechanical wire connectors (e.g. Picabond, Scotchloks, etc.).</li> <li>b. Aerial ready-access closure.</li> <li>c. Underground/direct-burial encapsulated closure.</li> </ul> <p>4.03 <del>Climb a pole of at least 20 feet in height using</del>  <del>lineman's gaffs in accordance with Army Manual FM 11-</del>  <del>372-6 Outside Plant Cable Maintenance and Repair and</del>  <del>NAVEDTRA Manual Construction Electrician 3 &amp; 2.</del> CH 9</p> <p>4.04 <del>Install a through bolt, guy, screw-anchor, and tension</del>  <del>the guy in accordance with Army Manual FM 11-372-6</del>  <del>Outside Plant Cable Maintenance and Repair and</del>  <del>NAVEDTRA Manual Construction Electrician 3 &amp; 2.</del></p> <p>4.05 Climb a tower of at least 60 feet in height in accordance with the Electronics Manual (COMDTINST M10550.25 series) and the Tower Manual (COMDTINST M11000.4 series).</p> <p>4.06 Splice a fiber optic cable in accordance with Lee's ABC Teletraining Volume 17 and the manufacturer's instructions.</p> <p>5.01 Given an installation plan, install underground and direct-buried communications cables in accordance with the National Electrical Safety Code (ANSI C2) and the Federal Information Processing Standards 174, 175, 176.</p>		
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<p>5.02 Perform general condition maintenance tasks on towers and antennas in accordance with the Electronics Manual (COMDTINST M10550.25 series) and the Tower Manual (COMDTINST M11000.4 series).</p> <p>6.01 Develop and implement an installation plan for an underground conduit system in accordance with the National Electrical Safety Code (ANSI C2), Federal Information Processing Standards 174, 175, 176, and Army Manual FM 11-486-5 Telecommunications Engineering Outside Plant Telephone.</p> <p>6.02 Develop and implement an installation plan for a buried cable distribution system in accordance with the National Electrical Safety Code (ANSI C2), Federal Army Manual FM 11-486-5 Telecommunications Engineering Outside Plant Telephone.</p> <p>6.03 Perform a Fall of Potential test on a grounding system in accordance with the Electronics Manual (COMDTINST M10550.25 series), MIL-HDBK-419, and the test equipment technical manuals.</p> <p>H. CARRIER SYSTEMS</p> <p>4.01 Perform channel alignments on an analog carrier system in accordance with Army FM manual 11-486-3 Telecommunications Engineering Transmission and Circuit Layout</p> <ul style="list-style-type: none"> <li>a. Adjust incoming and outgoing VF tone levels.</li> <li>b. Set up A-B signaling bit options.</li> </ul> <p>4.02 Perform channel alignments on a channel card/interface module within a digital carrier system in accordance with Understanding Data Communications and the equipment technical manuals:</p> <ul style="list-style-type: none"> <li>a. Adjust incoming and outgoing VF tone levels.</li> <li>b. Set up A-B signaling bit options.</li> </ul>		
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<p>5.01 Given circuit parameters, perform the following tests on a digital carrier circuit in accordance with the Guide to T-1 Networking and the test equipment</p> <ul style="list-style-type: none"> <li>a. Bit error rate.</li> <li>b. Alarm status.</li> <li>c. Bipolar violations.</li> <li>d. Framing/timing errors.</li> </ul> <p>I. ADMINISTRATION AND SUPPLY</p> <p>4.01 Perform the following word processing tasks using a Coast Guard Standard Workstation in accordance with the CGSW Word Processor User Guide:</p> <ul style="list-style-type: none"> <li>a. Open a document.</li> <li>b. Format and type a document.</li> <li>c. Print a document.</li> <li>d. Save a document.</li> <li>e. Copy a document.</li> <li>f. Rename a document.</li> <li>h. List a group of documents.</li> </ul> <p>4.02 Send and receive an electronic mail message using a Coast Guard Standard Workstation in accordance with the CGSW E-Mail User Guide.</p> <p>4.03 Perform the following tasks using a Coast Guard Standard Workstation in accordance with the CGSW Executive User Guide:</p> <ul style="list-style-type: none"> <li>a. Initialize a floppy disk.</li> <li>b. Copy data between a hard disk and a floppy disk.</li> </ul> <p>5.01 Complete the following documents in accordance with the Small Purchase Handbook (COMDTINST M4200.13C series) and the Comptroller Manual, Volume III, Supply and Property (COMDTINST M4400.13 series):</p> <ul style="list-style-type: none"> <li>a. DD-1149 Requisition and Invoice/Shipping Document.</li> <li>b. DOT F 4200.1.1 Procurement Request.</li> </ul> <p>5.02 Complete an Appropriation Purchase Account (APA) repairable electronic material transaction in accordance with the Electronics Manual (COMDTINST M10550.25 series) and the E/GIP 4408 instruction series.</p>		
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<p>5.03 Draft the following types of messages in accordance with NWP-10-1-10:</p> <ul style="list-style-type: none"> <li>a. CASREP.</li> <li>b. CASCOR.</li> <li>c. CASREP UPDATE.</li> </ul> <p>5.04 Perform an Electronic Equipment Information System (EEIS) transaction in accordance with the Electronics Manual (COMDTINST M10550.25 series), the EEIS User Manual, and the Comptroller Manual Volume III, Supply and Property (COMDTINST M4400.13 series).</p> <p>6.01 Perform shop inventory (tools, spare parts, etc.) in accordance with the Electronics Manual (COMDTINST M10550.25 series) and the Comptroller Manual, Volume III, Supply and Property (COMDTINST M4400.13 series).</p> <p>6.02 Prepare the unit's telecommunications preventive maintenance and corrective maintenance schedules in accordance with the Electronics Manual (COMDTINST M10550.25 series), the CGPMS User Guide and the equipment technical manuals.</p> <p>6.03 Inspect vendor-provided telecommunications service to ensure service is provided as ordered by the appropriate documents (Communications Service Authorizations (CSA) and Telephone Service Requests (TSR)) in accordance with the Telecommunications Manual (COMDTINST M2000.3B series) and Defense Information Services Agency Circular 310-130-1 and 350-135-1.</p> <p>7.01 Prepare Current Ships Maintenance Program (CSMP) or Shore Station Maintenance Request (SSMR) in accordance with the Electronics Manual (COMDTINST M10550.25 series), the Civil Engineering Manual (COMDTINST M11000.11 series), the Naval Engineering Manual (COMDTINST M9000.6 series).</p> <p>7.02 Demonstrate the procedures for surveying Personal Property Accountability (PPA) inventory items in accordance with the Comptroller Manual, Volume III, Supply and Property (COMDTINST M4400.13 series).</p>		
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<p>7.03 Validate Personal Property Accountability (PPA) and Electronics Equipment Information System (EEIS) inventories in accordance with the Electronics Manual (COMDTINST M10550.25 series) and the Comptroller Manual, Volume III, Supply and Property (COMDTINST M4400.13 series).</p> <p>8.01 Review the Telephone Technician qualification codes for accuracy and currency and submit results in writing to the Rating Manager in accordance with the Enlisted Qualification Codes Manual (COMDTINST M1414.9 series).</p> <p>9.01 Review E-4 through E-9 Telephone Technician Performance Qualifications for accuracy and currency and submit in writing to the Rating Manager in accordance with Enlisted Qualifications Manual (COMDTINST M1414.8 series).</p> <p>9.02 Prepare an Agency Procurement Request (APR) to request a Delegation of Procurement Authority (DPA) for telecommunications equipment in accordance with Federal Information Resource management Regulations 201-4.001, 201-20.305-3, 201-39.106-1, Bulletins A-1, C-5, and C-7, and the Planning Approval For Automated Information Systems (ALS), (COMDTINST 5231.1 series).</p> <p>9.03 Write a Statement of Work (SOW) for a contractor installation of a telecommunications system in accordance with Federal Information Resource Management Regulation 201-39.601.2 and Bulletin C-9.</p>		
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**REQUIRED REFERENCE MATERIALS FOR ADVANCEMENT**

**A. SAFETY AND FIRST AID**

- 4.01 COMDTINST M10550.25 (Electronics Manual) Chapter 2
- 4.02 American Heart Association manual Heartsaver
- 4.03 COMDTINST M10550.25 (Electronics Manual) Chapters 2 & 11
- 4.04 COMDTINST M10550.25 (Electronics Manual) Chapter 2
- 4.05 COMDTINST M10550.25 (Electronics Manual) Chapter 2
- 4.06 COMDTINST M10550.25 (Electronics Manual) Chapters 2 & 11
- 4.07 COMDTINST M10550.25 (Electronics Manual) Chapter 2
- 4.08 Army manual FM 11-372-6 Outside Plant Cable Maintenance and Repair
- 4.09 Army manual FM 11-372-6 Outside Plant Cable Maintenance and Repair
- 5.01 COMDTINST M10550.25 (Electronics Manual) Chapter 2 and NAVEDTRA manual Tools and Their Uses
- 5.02 COMDTINST M10550.25 (Electronics Manual) Chapter 2
- 6.01 COMDTINST M10550.25 (Electronics Manual) Chapter 2

**B. ELECTRONIC COMPONENTS AND CIRCUITRY**

- 4.01 NAVEDTRA manuals Navy Electrical and Electronics Training Series and the NAVELEX Electronics Information and Maintenance Bulletin-Electronic Circuits
- 4.02 NAVEDTRA manuals Navy Electrical and Electronics Training Series and the NAVELEX Electronics Information and Maintenance Bulletin-Electronic Circuits
- 4.03 NAVEDTRA manuals Navy Electrical and Electronics Training Series and the NAVELEX Electronics Information and Maintenance Bulletin-Electronic Circuits

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REQUIRED REFERENCE MATERIALS FOR ADVANCEMENT

- 4.04 NAVEDTRA manuals Navy Electrical and Electronics Training Series and the NAVEXLEX Electronics Information and Maintenance Bulletin-Electronic Circuits
- 4.05 Equipment technical manuals, NAVEDTRA manuals Navy Electrical and Electronics Training Series and the NAVEXLEX Electronics Information and Maintenance Bulletin-Electronic Circuits
- C. SHOP PRACTICES
- 4.01 Manufacturer's instructions
- 4.02 NAVSHIPS Cable Comparison Guide and NAVEDTRA manual IC Electrician 3
- 4.05 NAVEDTRA manual Navy Electrical and Electronics Training Series (Module 14) and COMDTINST M10550.25 (Electronics Manual)
- 4.06 Manufacturer's instructions and COMDTINST M10550.25 (Electronics Manual)
- 5.01 NAVEDTRA manual Construction Electrician 3, NAVEDTRA manual Tools and Their Uses, and Army manual FM 11-487-3 Telephone Inside Plant Installation Fundamentals
- 5.02 National Electric Code and NAVEDTRA manual Construction Electrician 3
- 5.03 National Electric Code, MIL-HDBK-419, and COMDTINST M10550.25 (Electronics Manual)
- 5.04 NAVEDTRA manual Hull Maintenance Technician 3 & 2, Naval Ships Technical Manual Volume I Chapter 074, and the manufacturer's instructions
- 5.05 NAVEXLEX manual Designers Planning Manual for Naval Communications Facilities Ashore
- 6.01 NAVEXLEX manual Designers Planning Manual for Naval Communications Facilities Ashore
- 8.01 COMDTINST M11000.11 (Civil Engineering Manual) and Federal Information Processing Standard 175

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REQUIRED REFERENCE MATERIALS FOR ADVANCEMENT

D. VOICE TELECOMMUNICATIONS SYSTEMS

- 4.01 Voice circuit parameters and applicable test equipment technical manuals
- 4.02 Lee's ABC Teletraining Volume 1 and the National Electric Code
- 4.03 Applicable circuit layout records and transmission equipment technical manuals
- 4.04 Circuit signalling configuration documentation and signalling and test equipment technical manuals
- 4.05 National Electric Code, Federal Information Processing Standard 176 and Lee's ABC Teletraining Volume 2
- 4.06 Lee's ABC Teletraining Volume 2
- 4.07 Equipment technical manuals
- 4.08 National Electric Code, Federal Information Processing Standard 176, Lee's ABC Teletraining Volume 2 and the equipment technical manuals
- 4.09 Equipment technical manuals
- 4.10 National Electric Code, Federal Information Processing Standard 176, Lee's ABC Teletraining Volume 15, and the equipment technical manuals
- 4.11 Equipment technical manuals
- 4.12 National Electric Code, Federal Information Processing Standard 176, Lee's ABC Teletraining Volume 2, and the equipment technical manuals
- 4.13 Equipment technical manuals
- 4.14 National Electric Code and the equipment technical manuals
- 4.15 Equipment technical manuals.
- 5.01 Signalling requirements (Supervisory, Address and Control), Tellabs Manual Special Services Telephony and the equipment technical manuals

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REQUIRED REFERENCE MATERIALS FOR ADVANCEMENT

5.02 Installation plan, National Electric Code, Federal Information Processing Standards 174, 175, and 176, and the equipment technical manuals

5.03 Installation plan, National Electric Code, Federal Information Processing Standards 174, 175 and 176, COMDTINST M10550.25 (Electronics Manual), and the equipment technical manuals

5.04 Equipment technical manuals

5.05 Installation plan, National Electric Code, and the equipment technical manuals

6.01 Analog circuit test results, applicable vendor tariffs and circuit specifications

6.02 Equipment technical manuals

6.03 Appropriate facility installation standards

6.04 National Electric Code, Federal Information Processing Standards 174, 175 and 176, and the equipment technical manuals

7.01 Appropriate facility installation standards

7.02 National Electric Code, Federal Information Processing Standards 174, 175, and 176, COMDTINST M10550.25 (Electronics Manual), COMDTINST M2000.3B (Telecommunications Manual), COMDTINST M11000.11 (Civil Engineering Manual), and the Dow Jones-Irwin text Handbook of Telecommunications Management

7.03 National Electric Code, Federal Information Processing Standards 174, 175, and 176, COMDTINST M10550.25 (Electronics Manual), COMDTINST M2000.3B (Telecommunications Manual), COMDTINST M11000.11 (Civil Engineering Manual), and the Dow Jones-Irwin text Handbook of Telecommunications Management

8.01 National Electric Code, Federal Information Processing Standards 174, 175, and 176, COMDTINST M10550.25 (Electronics Manual), COMDTINST M2000.3B (Telecommunications Manual), COMDTINST M11000.11 (Civil Engineering Manual), and applicable equipment engineering specifications

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REQUIRED REFERENCE MATERIALS FOR ADVANCEMENT

**E. DATA TELECOMMUNICATIONS SYSTEMS**

- 4.01 Understanding Data Communications, Lee's ABC Teletraining Volume 11, and the equipment technical manuals
- 4.02 Understanding Data Communications, test equipment technical manuals, and applicable network, circuit, and equipment specifications
- 4.03 Understanding Data Communications, applicable EIA/MIL-STD interface specifications, and the equipment technical manuals
- 5.01 Installation plan, National Electric Code, the Federal Information Processing Standards 174, 175, and 176, COMDTINST M10550.25 (Electronics Manual), and the equipment technical manuals
- 6.01 Bit-error rate test results, and applicable vendor tariffs and circuit specifications
- 7.01 Appropriate facility installation standards
- 7.02 National Electric Code, Federal Information Processing Standards 174, 175, and 176, COMDTINST M10550.25 (Electronics Manual), COMDTINST M2000.3B (Telecommunications Manual), COMDTINST M11000.11 (Civil Engineering Manual), and the Dow Jones-Irwin text Handbook of Telecommunications Management
- 8.01 Federal Information Processing Standards 174, 175, and 176, COMDTINST M10550.25 (Electronics Manual), COMDTINST M2000.3B (Telecommunications Manual), the Dow Jones-Irwin text Handbook of Telecommunications Management, and equipment engineering specifications

**F. SHIPBOARD TELECOMMUNICATIONS SYSTEMS**

- 4.01 Equipment technical manuals.
- 5.01 Ship's drawings
- 8.01 COMDTINST M10550.25 (Electronics Manual), COMDTINST M9000.6 (Naval Engineering Manual), and equipment engineering specifications



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REQUIRED REFERENCE MATERIALS FOR ADVANCEMENT

**G. OUTSIDE PLANT**

- 4.01 Army manual FM 11-372-4 Outside Plant Cable Testing and the test equipment technical manuals
- 4.02 Army manual FM 11-372-1 Outside Plant Cable Splicing and the manufacturer's instructions
- 4.03 Army manual FM 11-372-6 Outside Plant Cable Maintenance and Repair and NAVEDTRA manual Construction Electrician 3 & 2
- 4.04 Army manual FM 11-372-6 Outside Plant Cable Maintenance and Repair and NAVEDTRA manual Construction Electrician 3 & 2
- 4.05 COMDTINST M10550.25 (Electronics Manual) and COMDTINST M11000.4 (Tower Manual)
- 4.06 Lee's ABC Teletraining Volume 17 and the manufacturer's instructions
- 5.01 Installation plan, National Electrical Safety Code (ANSI C2) and the Federal Information Processing Standards 174, 175, and 176
- 5.02 COMDTINST M10550.25 (Electronics Manual) and COMDTINST M11000.4 (Tower Manual)
- 6.01 National Electrical Safety Code (ANSI C2), Federal Information Processing Standards 174, 175, and 176, and Army manual FM 11-486-5 Telecommunications Engineering-Outside Plant Telephone
- 6.03 COMDTINST M10550.25 (Electronics Manual), MIL-HDBK-419, and the test equipment technical manuals

**H. CARRIER SYSTEMS**

- 4.01 Army manual FM 11-486-3 Telecommunications Engineering-Transmission and Circuit Layout and the equipment technical manuals
- 4.02 Understanding Data Communications and the equipment technical manuals
- 5.01 Circuit parameters, Guide to T-1 Networking and the test equipment technical manuals

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REQUIRED REFERENCE MATERIALS FOR ADVANCEMENT

**I. ADMINISTRATION AND SUPPLY**

4.01 CGSW Word Processor User Guide

4.02 CGSW E-Mail User Guide

5.01 COMDTINST M4200.13B (Small Purchase Handbook) and COMDTINST M4500 (Comptrollers Manual Volume III)

5.02 COMDTINST M10550.25 (Electronics Manual) and the E/GICP instruction 4408 (series)

5.03 NWP-10-1-10

5.04 COMDTINST M10550.25 (Electronics Manual), the EEIS User Manual, and COMDTINST M4500 (Comptrollers Manual)

6.01 COMDTINST M10550.25 (Electronics Manual) and COMDTINST M4500 (Comptrollers Manual)

6.02 COMDTINST M10550.25 (Electronics Manual), the CGPMS User Guide, and the equipment technical manuals

6.03 COMDTINST M2000.3B (Telecommunications Manual) and Defense Information Services Agency Circular 310-130-1 and 350-135-1

7.01 COMDTINST M10550.25 (Electronics Manual), COMDTINST M11000.11 (Civil Engineering Manual), and COMDTINST M9000.6 (Naval Engineering Manual)

7.02 COMDTINST M4500 (Comptrollers Manual Volume III)

7.03 COMDTINST M10550.25 (Electronics Manual) and COMDTINST M4500 (Comptrollers Manual Volume III)

8.01 COMDTINST M1414.9B (Enlisted Qualification Codes Manual)

9.01 COMDTINST M1414.8B (Enlisted Qualifications Manual)

9.02 Federal Information Resource Management Regulations 201-4.001, 201-20.305-3, 201-39.106-1, Bulletins A-1, C-5, and C-7, and COMDTINST 5231.2 (series)

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REQUIRED REFERENCE MATERIALS FOR ADVANCEMENT

9.03 Federal Information Resource Management Regulation 201-39.601.2 and  
Bulletin C-9

RECOMMENDED REFERENCE MATERIALS FOR ADVANCEMENT

Voice and Data Telecommunications by Gurrie

Technician's Guide to Fiber Optics by Sterling

Lee's ABC Teletraining (complete set)

Building Industry Consulting Services Inc. (BICSI) manual

Lineman's and Cableman's Handbook by Kurtz and Shoemaker

Electronic Communications by Shrader

Electricity 1-7 by Mileaf

Electronics 1-7 by Mileaf

Troubleshooting Communications Facilities by Lindberg

Handbook for Sound Engineers - The Audio Cyclopedia by Ballou

Sound System Engineering by Davis

Telecom Dictionary by Newton

AG Communications Manuals (complete set)

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